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1 1. (original) A discharge lamp having a reflector and cooling means, which cooling
2 means has at least one nozzle (3; 31, 32, 33, 34) through which a flow of gas can be directed
3 onto the discharge lamp, wherein the at least one nozzle (3; 31, 32, 33, 34) is arranged such that
4 it does not extend, at least to any substantial degree, into a beam path produced by the lamp (2)
5 and the reflector (1).

1 2. (original) A discharge lamp as claimed in claim 1, wherein the at least one nozzle
2 (3; 31, 32, 33, 34) is inserted in a hole in the reflector (1).

1 3. (previously presented) A discharge lamp as claimed in claim 1, wherein a
2 velocity of the flow of gas emerging from the at least one nozzle (3, 31, 32, 33, 34) is of a value
3 such that a turbulent flow is produced that surrounds at least part of the lamp (2).

1 4. (original) A discharge lamp as claimed in claim 1, wherein at least two nozzles
2 (31, 32; 33, 34) that are at an angle to one another are directed at the discharge lamp (2) such that
3 a turbulent flow is produced that surrounds at least part of the lamp (2).

1 5. (original) A discharge lamp as claimed in claim 4, wherein the nozzles (31, 32;
2 33, 34) are at an angle of approximately 90° to one another.

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1 6. (original) A discharge lamp as claimed in claim 1, wherein a first sensor (41) is
2 arranged adjacent at least one of the nozzles (3; 31, 32, 33, 34) to sense the velocity and/or the
3 pressure and/or the flow-rate of a flow of gas passing through the nozzle (3; 31, 32, 33, 34).

1 7. (currently amended) A discharge lamp as claimed in claim 1, wherein at
2 least one first nozzle (31, 32) is directed at a region of ~~the~~a discharge vessel (21) that is at the
3 top in the position in which the discharge lamp (2) is operating, and at least one second nozzle
4 (33, 34) is directed at a region of ~~a~~the discharge vessel (21) that is at the bottom in this same
5 operating position.

1 8. (currently amended) A discharge lamp as claimed in claim 7, wherein ~~the~~a
2 velocity of the flow of gas passing through at least one of the nozzles (3; 31, 32, 33, 34) can be
3 controlled as a function of the operating position of the discharge lamp (2).

1 9. (original) A discharge lamp as claimed in claim 7, wherein a second sensor (12)
2 is provided to sense the operating position of the discharge lamp (2) and to control the velocity
3 of the flow of gas passing through at least one of the nozzles (3; 31, 32, 33, 34) as a function of
4 the operating position.

1 10. (previously presented) A discharge lamp comprising
2 - a discharge element;

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- 3 - a reflector about the discharge element for producing a beam path toward an exit
4 window;
- 5 - cooling means, comprising at least one nozzle arranged at the exterior of the reflector and
6 having an opening at the boundary of the reflector inside the lamp, the nozzle pointing
7 toward the discharge element, but not parallel to an axis of symmetry created by the
8 discharge element and a neck of the reflector.

1 11. (previously presented) The lamp of claim 10 comprising at least one second nozzle, also
2 having an opening at the boundary of the reflector inside the lamp, pointing toward the discharge
3 element, but not parallel to the axis, the second nozzle forming an angle with respect to the first
4 nozzle such that a turbulent flow is produced around the discharge element.

1 12. (previously presented) The lamp of claim 10, wherein the nozzle is arranged perpendicularly
2 to the beam path.

1 13. (previously presented) The lamp of claim 10, comprising at least first and second nozzles
2 arranged approximately opposite each other across the axis.

1 14. (previously presented) The lamp of claim 10, wherein the nozzle is arranged near the exit
2 window and pointing back approximately toward a neck of the reflector.

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1 15. (previously presented) The lamp of claim 10, wherein the nozzle is not arranged in a neck of
2 the reflector.

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4 16. (New) A discharge lamp comprising

- 5 • a reflector;
- 6 • a discharge vessel for emitting light onto the reflector, thereby creating a beam path;
- 7 • cooling means for adequately cooling an upper region of the lamp, while a bottom region is
8 not too severely cooled, in a position independent fashion, the cooling means comprising
 - 9 ○ at least first and second independently controllable nozzles for directing a flow of
10 gas into the lamp, the nozzles being arranged such that they do not extend, at least to any
11 substantial degree, into the beam path, and so that an upper region of the lamp is adequately
12 cooled, while a bottom region is not too severely cooled;
 - 13 ○ at least one first sensor for measuring a cooling effect of the nozzles; and
 - 14 ○ at least one second sensor for detecting an operation position of the lamp.